

SECTION 03600**GROUT****PART 1 - GENERAL****1.01 SCOPE OF WORK**

This section specifies grout products and cementitious grout as indicated on the Drawings or where required for a complete installation.

1.02 RELATED WORK

Section 03300 - Cast-In-Place Concrete

1.03 SUBMITTALS

A. Manufacturer's literature shall be submitted for review on the following items.

1. Nonshrink grout data shall include grout properties, mixing, surface preparation and installation instructions.
2. Mix design for grout at tank bottom slabs.

1.04 DELIVERY AND STORAGE

Grouting materials shall be delivered and stored in unbroken containers with seals and labels intact as packaged by the manufacturer.

PART 2 - PRODUCTS**2.01 GROUT PRODUCTS**

- A. Nonshrink, Nonmetallic Grout: Five Star Special Grout 150, Sauereisen F-100 Level Fill, Master Builders Masterflow 713, Euclid NS Grout, or equal pre-mixed type.
- B. Nonshrink Metallic Grout: Master Builders Embeco 636 Grout pre-mixed type, or equal.
- C. Epoxy Grout: "Five Star" epoxy grout by U.S. Grout Corp., or equal, available from Coastal Construction Products, Miami, FL or "Wall Nu" (Trowel Mix) by Steelcote Mfg. available from Florida Wire and Rigging Works.
- D. See Section 15065 for additional epoxy grouts

2.02 CEMENTITIOUS GROUT MATERIALS

- A. Portland Cement: ASTM C150, latest edition, Type I (use Type II if exposed to sewage).

- B. Sand: ASTM-C144, latest edition, sharp natural sand mined in fresh water, hard durable grains, free of soft, flaky particles, salt, alkalis and organic material. Salt water sand is strictly prohibited.
- C. Water: Potable

PART 3 - EXECUTION

3.01 PREPARATION & MIXES

- A. All bonding surfaces shall be clean and dust and oil free. Grout shall be mixed and applied in accordance with manufacturer's recommendations.
- B. Grout mix proportions (for grout to fill cores in reinforced masonry walls)
 - 1. One part Portland cement, Type I
 - 2. 2-1/4 parts damp, loose sand.
 - 3. 2 Parts shot gravel (3/8" maximum).
 - 4. Mix to conform to ASTM C476, latest edition, with a minimum compressive strength of 2500 psi at 28 days, have an 8" minimum and 10" maximum slump.

Measurement of materials shall be such that the specified proportions are controlled and accurately maintained.

- C. Grout for filling the interior of concrete pipe joints shall be composed of one part of Type II (Type I if used in water main) portland cement to 2 parts of sand and sufficient water to make a stiff mixture. Grout for filling the exterior of concrete pipe joints shall be composed of one part Type II (Type I if used in water main) Portland cement to 2 parts of sand and sufficient water to make a fluid mixture suitable for pouring.

3.02 INSTALLATION

- A. Nonshrink Grout:
 - 1. Nonshrink, nonmetallic grout shall be used for grouting precast concrete wall panel connections, column base plates, pipe sleeves, machinery supports and pump base plates.
 - 2. Grout shall be mixed as close to the work area as possible and transported quickly to its final position in a manner which will not permit segregation of materials.
 - 3. Nonshrink grout shall be cured with water saturated burlap for at least three days or with an application of Super Rez Seal cure and seal compound applied immediately after grout placement.
 - 4. Machinery set on grout pads shall not be operated until the grout has cured for at least 24 hours.
 - 5. Epoxy grout shall be used for anchor bolts and reinforcing bars.

END OF SECTION